

Multiple Sclerosis

-Autoimmune inflammatory demyelinating disease of the central nervous system

Epidemiology/risk factors

- Prevalence in the US is 100 per 100,000 (a total of 250,000 persons with MS). Northern European descent, highest risk. Asian, African, and Native Americans with lowest risk and other groups in between.
- Prevalence increases with further distance from the equator.
- Female-to-male ratio of 2:1, particularly in women of child-bearing age of the Northern European descent)
- Median & mean ages of MS onset 23.5 and 30 years of age, respectively. Peak age of onset 5 yrs earlier for women than for men.
- Patients with other autoimmune disorders such as type I DM, IBD, and autoimmune thyroid disease more likely to develop MS.
- Genetic factors, particularly variation involving the HLA-DRB1 locus.

Symptoms

- A typical patient is a young person with two or more episodes of CNS dysfunction with some resolution
- Relapses and remissions. Symptoms transient, lasting days, weeks or months
- Age of onset between 15 and 50
- Ocular symptoms:
 - Optic neuritis: sudden loss or blurring of vision in one eye
 - Internuclear ophthalmoplegia: abnormal horizontal ocular movements and horizontal nystagmus in the abducting eye
 - Diplopia
- Muscular problems: focal limb weakness, numbness, paresthesias and ataxia
- bladder dysfunction, speech problems
- Pain: trigeminal neuralgia, back pain, visceral pain, Lhermitte's sign (electric shock-like sensations that run down the back and/or limbs with flexion of the neck)

Diagnosis

- Clinical diagnosis and laboratory studies: neuroimaging (MRI most sensitive & shows white matter lesions), cerebrospinal fluid analysis (increased oligoclonal IgM and IgG) and prolonged evoked potentials
- Disease pattern (relapsing remitting, secondary progressive, primary progressive, progressive relapsing)

Treatment and follow-up

- Immunosuppressive therapies such as interferon B1b (Betaseron) or -B1a (Rebif, Avonex, cyclosporine, methotrexate, cyclophosphamide, and symptomatic therapy with corticosteroids
 - Assistive devices: canes, braces, walkers, wheelchairs. Physical and speech therapy
- (References: www.uptodate.com, www.ncbi.nlm.nih.gov)

